October 26, 2004

MEMORANDUM

SUBJECT: NADBank/BEIF Grant Funding
City of Weslaco, Hidalgo County, Texas

FROM: Gerald Fontenot, P.E., Deputy Director
Compliance Assurance and
Enforcement Division (6EN)

TO: Richard E. Greene
Regional Administrator

Attached for your signature is the Environmental Assessment, Finding of No Significant Impact (EA/FNSI) package for the proposed awarding of Environmental Protection Agency grant funds to the city of Weslaco, Hidalgo County, Texas, for its water/wastewater treatment improvement project. The proposed funding will be provided from the Border Environment Infrastructure Fund (BEIF) administered by the North American Development Bank.

This EA is based on the environmental information document prepared for the city of Weslaco by a consultant. No significant adverse environmental impacts associated with the awarding of the grant funds were identified. The EA/FNSI package will be issued for 30-day public notice to solicit comments regarding this decision not to prepare an Environmental Impact Statement (EIS). The decision will become final after the comment period expires and any comments received are addressed.

Attachment

November 3, 2004

FINDING OF NO SIGNIFICANT IMPACT

To All Interested Agencies and Public Groups:

In accordance with the regulations of the Council on Environmental Quality (CEQ), "*Regulations For Implementing The Procedural Provisions of the National Environmental Policy Act*," at 40 Code of Federal Regulations, Part 1500, the U. S. Environmental Protection Agency (EPA) has performed an environmental assessment of the following proposed action.

Proposed Action: Border Environmental Infrastructure Fund (BEIF) grant for the proposed Water and Wastewater Systems Improvement Project.

Applicant: City of Weslaco, Hidalgo County, Texas

Proposed Action. The City of Weslaco is located between McAllen and Harlingen in Hidalgo County, approximately seven miles north of the Mexican community of Nuevo Progreso. The city's water treatment plant (WTP) currently has a firm capacity of 7.3 million gallons per day (MGD) and a total capacity of 9.2 MGD. However, the WTP has reached 95 percent of its rated capacity during the summer months and Texas Commission on Environmental Quality (TCEQ) regulations require expansion planning to commence when 85 percent of its rated capacity is attained. Based on population, which was estimated to be 27,967 in 2002, and flow projections, the firm capacity of the WTP must be increased by 5.7 MGD to 13.0 MGD to meet the community's water demands to the year 2025, and comply with TCEQ regulations.

Also, the headworks of the city's 3.0 MGD North Wastewater Treatment Plant (NWWTP) are corroded and deteriorated and the city proposes to replace them. After construction of the 2.0 MGD South Wastewater Treatment Plant (SWWTP) in 1998, the NWWTP was downscaled and its trickling filters were decommissioned and cleaned. The digesters, however, were not decommissioned, resulting in a TCEQ administrative penalty. The design of replacement headworks is presently underway.

The major federal action involved is the approval of BEIF funds administered by the North American Development Bank (NADBank). The Border Environment Cooperation Commission (BECC) certifies NADBank projects before the BEIF funds can be approved. This Environmental Assessment (EA) is part of the BECC certification process in compliance with the National Environmental Policy Act (NEPA). The BECC assists communities and other sponsors in developing and implementing environmental infrastructure projects. Additional funding may be available through other programs administered by various state or federal agencies.

Findings: Based on the EA performed by the EPA of the proposed water and wastewater systems improvements, the Regional Administrator has made a preliminary determination that the project is not a major Federal action individually, cumulatively, or in conjunction with any other action significantly affecting the quality of the human environment, and that the preparation of an Environmental Impact Statement (EIS) is not warranted. The EA is based upon the EID

prepared by Naismith Engineering, Inc. and dated April 2004. The proposed project is considered to be cost-effective and environmentally sound, and approval of the proposed grant is recommended.

Comments regarding this preliminary decision not to prepare an EIS and to issue a Finding of No Significant Impact (FNSI) may be submitted to the U.S. Environmental Protection Agency; Office of Planning and Coordination (6EN-XP); 1445 Ross Avenue, Suite 1200; Dallas, Texas 75202-2733. All comments will be taken into consideration. This preliminary decision and the FNSI will become final after the 30-day comment period expires if no new information is provided to alter this finding. No administrative action will be taken on this decision during the 30-day comment period. Copies of the EA and requests for review of the Administrative Record containing the information supporting this decision may be requested in writing at the above address, or by telephone at (214) 665-8150.

Responsible Official,

/S/

Richard E. Greene
Regional Administrator

Enclosure

ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED IMPROVEMENT OF THE
WASTEWATER TREATMENT AND COLLECTION SYSTEM
CITY OF WESLACO, HIDALGO, TEXAS

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Proposed Action. The City of Weslaco is located in Hidalgo County between McAllen and Harlingen, approximately seven miles north of the Mexican community of Nuevo Progreso. The city's water treatment plant (WTP) presently has a firm capacity of 7.3 million gallons per day MGD, and a total capacity of 9.2 MGD. Population and flow projections indicate that the WTP capacity should be increased to 13.0 MGD to meet the water demands of the community to the year 2025, and to comply with Texas Commission on Environmental Quality (TCEQ) regulations. According to studies and projections, the WTP reaches 95 percent of its rated capacity during the summer months and TCEQ regulations require that expansion planning be initiated when the WTP reaches 85 percent of its rated capacity. In order to meet the 13.0 MGD flow, the firm capacity must be increased by 5.7 MGD. The estimated population of Weslaco was 27,967 in 2002.

The city also plans to refurbish or replace the headworks of the 3.0 MGD North Wastewater Treatment Plant (NWWTP) which was downscaled after construction of the 2.0 MGD South Wastewater Treatment Plant (SWWTP) in 1998. When it was downscaled, the trickling filters of the NWWTP were decommissioned and cleaned. The digesters, however, were not decommissioned, resulting in a TCEQ administrative penalty of $9,375 for violation of a TCEQ order. The headworks are corroded and deteriorated and need to be replaced. New headworks are currently being designed. Both the WTP and NWWTP are located within the extraterritorial jurisdiction of the city.

1.2 Recommendation. Based on the Environmental Assessment (EA) performed by the EPA of the proposed expansion of the WTP and replacement of the headworks of the NWWTP, no significant adverse impacts to the environment or cultural resources have been identified. The EA is based upon the Environmental Information Document (EID) prepared by Naismith Engineering, Inc. and dated April 2004. The potential direct, indirect, and cumulative environmental impacts that could result from the proposed action have been evaluated, and the responses from the appropriate agencies indicate that there are no environmental concerns needing further study. The proposed project is considered to be cost-effective and environmentally sound, and approval of the proposed grant is recommended.

The major federal action involved is the approval of a Border Environmental Infrastructure Fund (BEIF) grant administered by the North American Development Bank (NADBank). The Border Environment Cooperation Commission (BECC) certifies NADBank projects before BEIF funds can be approved. The EA is part of the BECC certification process in compliance with the National Environmental Policy Act (NEPA). The BECC assists local communities and other sponsors in developing and implementing environmental infrastructure projects. Additional funding may be available through programs administered by other state and federal agencies.

2.0 ALTERNATIVES CONSIDERED AND PREFERRED ALTERNATIVE

2.1 Alternatives Available to the EPA.

2.1.1 Approval for Grant Funding of the Project as Proposed. EPA can recommend approval of the grant funding of the proposed project without modification.

2.1.2 Approval for Grant Funding for Proposed Project with Modifications. Information received during the EA process could result in identification of significant adverse impacts that would require modification of the project to mitigate the impacts. Modification of the project may allow the EPA to accept the project as modified and recommend approval of the grant funding.

2.1.3 Recommend Preparation of an EIS. A determination that the project as proposed could result in potentially significant adverse impacts to the environment that cannot be satisfactorily mitigated would preclude a recommendation of approval of the grant funding. The preparation of an Environmental Impact Statement (EIS) would then be recommended to evaluate the potentially significant impacts. The EIS process includes a scoping meeting to identify critical facts and issues, a Draft EIS, a public comment period on the Draft EIS, a public hearing on the Draft EIS, the Final EIS, a public comment period on the Final EIS, and a Record of Decision.

2.2 Alternatives Considered by the Applicant. Various alternative water treatment schemes were considered to increase the capacity of the WTP to 13.0 MGD. One of the basic criteria was to maximize the use of the existing treatment units. At the same time, it was recognized that the existing treatment units had some inherent weaknesses that had to be corrected or eliminated.

2.2.1 WTP Alternatives.

Alternative 1 - No Action Alternative. The No-action Alternative is not recommended. While this alternative has the lowest cost to the city, its benefits do not outweigh its potential effects on the health and safety of residents, and the existing difficulties in meeting minimum regulatory requirements would remain. The sedimentation and filtration units would continue to be ineffective and would continue to have a lower quality of water treatment. According to TCEQ, all sedimentation units were effective only 25 percent of the time, while Plants 3 and 4 sedimentation basins were 60 percent and 20 percent effective, respectively. Also, the filtration units were not 100 percent effective. Although the sludge has been removed from the digesters, they have not been properly cleaned and hazardous materials may remain. The abandoned digester structures also present a physical safety hazard if accessed by unauthorized personnel. The greatest potential impact of the No-action Alternative would be the city's inability to provide safe drinking water to its residents and would likely be subject to additional enforcement action, fines and administrative penalties.

Alternative 2 - Membrane Treatment Process. Alternative 2 is not Recommended. This alternative would address all WTP inadequacies, but would have a significantly higher cost than Alternative 3. Alternative 2 proposes a membrane treatment process in which the existing plant will be converted into a microfiltration-based treatment plant. Microfiltration is a low-pressure membrane process that has been shown to be applicable for treating surface waters, and to be effective for the removal of particulates, turbidity, *Giardia* and *Cryptosporidium*.

In general, membrane treatment is considered one of the best available technologies and utilization of membrane processes is a competitive alternative to the conventional treatment due to their reliability, superior finished water quality and ease of operation and maintenance. This alternative would utilize the existing flocculation and sedimentation basins at Plants 2, 3 and 4. Settled water from these plants would flow into the membrane building for microfiltration, followed by chemical disinfection and storage in the existing clearwells. The use of existing flocculation and sedimentation units as pre-treatment for the microfiltration process would ensure that the proposed process is economically viable. The existing filters that serve Plants No. 2, 3 and 4 would be demolished and the new membrane building would be constructed. The existing common rapid mix chamber would either be equipped with new mechanical mixers or will entirely be replaced with a new rapid mix chamber.

The construction cost of the membrane plant depends on the membrane equipment cost, site constraints, pre-treatment requirements and the building requirements for the facility. Since the existing conventional treatment facilities will be used for pre-treatment, the construction cost will be exclusive of these pre-treatment facilities.

Modification Subtotal*	$14,568,000
Administration/Legal/Engineering @ 20%	$ 2,913,600
Membrane Pilot Test	$ 150,000
Total	**$17,632,000**

* The major operation and maintenance costs associated with the membrane plants include membrane replacement, chemical and power. The labor general maintenance is a fixed O&M cost, which usually remain constant. O&M costs are likely to be approximately $0.15 more than conventional treatment per 1000 gallons of water treated. This is based on typical O&M costs for similar membrane treatment processes.

Alternative 3 - Conventional Water Treatment Process. Alternative 3 is the preferred alternative and is recommended. It would address all WTP capacity inadequacies and have lower cost than Alternative 2. Also the staff is familiar with the technology. This alternative has similar treatment technology as the existing conventional treatment system. The existing rapid mix chamber and splitter box would be demolished and a new rapid mix/splitter box would be constructed to create a proper split between the existing and new treatment facilities. New flocculation basins, sedimentation tanks and filters, an ultraviolet disinfection system, and a new filtration building housing are proposed. The existing filters would be upgraded to continue to serve Plants 2 and 3, and the solids contact basin at Plant 4 would be demolished or used to handle generated solids.

The construction costs and estimated operation and maintenance (O&M) costs for this alternative are projected to be less than for Alternative 2. Based on typical O&M costs for similar treatment facilities, the O&M costs for Alternative 3 will be less by approximately $0.15 per 1,000 gallons of water treated.

Modification Subtotal	$12,938,000
Administration/Legal/Engineering@20%	$ 2,587,600
Total	**$15,526,000**

2.2.2 Alternate Methods of Sludge Control. Two alternatives for the removal or sludge were considered by the city. Alternative 1 involves handling the sludge on-site and the preferred Alternative 2 would transport the sludge to a sanitary landfill.

Alternative 1 - On-site Disposal. Alternative 1 would provide for on-site disposal of the generated sludge. However, the site does not have enough land for on-site disposal or on-site incineration of sludge. Incineration may provide the benefit of quick disposal but would have a potential impact to air quality. Also, this alternative would locate the disposal area in close proximity to the raw water storage ponds and the finished water ground storage.

Alternative 2 - Off-site Disposal. Alternative 2 provides the best choice for community health, environmental protection and practicality. Sludge from the existing plant would continue to be disposed of off-site landfill by a private waste management firm. The city would continue to document compliance with all applicable state and federal waste management requirements and continue to verify proper permitting for dispose of sludge.

2.2.3 WWTP Alternatives. The city plans to repair or replace the headworks of the NWWTP which are corroded and deteriorated and do not work efficiently. The city is currently working with a consultant to prepare a facility plan for refurbishment of the headworks and address all applicable regulatory and funding requirements. The NWWTP has two old digesters that were

abandoned in 1999 and were under TCEQ order to dismantle them. The city of Weslaco was assessed a penalty for not complying with the TCEQ order.

Alternative 1 - No Action Alternative. Alternative 1 is not recommended. Although this alternative does not require up-front capital expenditure, any cost savings are offset by the potential consequences to health and environmental issues for residents. Under the No-action Alternative the city would still be in violation of a TCEQ order and continue running fines and penalties which would eliminate any cost savings. While the digesters have been drained of sludge, the possibility exists that not all hazardous material were removed and the abandoned digesters could present a safety and environmental hazard.

Alternative 2 - Digester Decommissioning Plan and NWWTP Headworks Replacement. Alternative 2 is the recommended alternative and would replace the headworks. It has the lower cost of the alternatives and the city would eliminate a potential human health and environmental hazard from the sludge inside the digesters. The digesters have been drained and must be properly decommissioned. This involves cleaning the digesters to ensure that no hazardous material is present and demolishing the remaining structure. The consultant engineer is presently in the process of designing the new headworks.

3.0 AFFECTED ENVIRONMENTAL SETTING

3.1 Land Use. Topographically, Hidalgo County is flat near the Rio Grande and has a hilly northern region. The average annual rainfall in the region is low. Soils of the region are 60 percent loams and 22 percent sands with clay and loams making up the rest (Jahrsdoerfer and Leslie, 1988). Livestock grazing and crop production dominate the agricultural land uses. (Texas Parks and Wildlife Department - TPWD, 2000)

With the exception of the sedimentation and flocculation basins, all new units at the WTP will be sited within the plant grounds on already cleared and disturbed land. Clearing of trees for the sedimentation and filtration units will not change the land use of this area, as it is unoccupied and adjacent to the existing WTP and FM 88. The property on which the existing water and wastewater treatment plants are sited would not affect agricultural lands, since these areas have been dedicated to their current land usage for several years. The primary impact to the environment around the project area will be from the construction activities. Excavation and trench work will create short-term problems of soil erosion and dust emissions. To help facilitate revegetation, all backfill should be redressed with preexisting topsoil. Sludge from the WTP will continue to be disposed of at an off-site landfill by a privately-owned waste management firm. Environmental effects from sludge handling would not increase beyond projected population trends. It is not anticipated that any scenic views would be impacted. No additional traffic would be generated in the area.

3.2 Water Resources.

3.2.1 Surface Water. The WTP receives its raw water from the Rio Grande through an above ground irrigation canal operated by Hidalgo and Cameron County Irrigation District No.9. There are no major tributaries to the Rio Grande in the project area and no area waterways will be affected by the project. The majority of water usage for this part of Texas is from surface water resources. Storm water run-off drains into the abandoned channels and oxbows, storm sewers and man-made drainage ditches are operated and maintained by the Hidalgo County Drainage District No.1. The majority of run-off flows into TCEQ Segment 2301 of the Rio Grande. State regulations require the implementation of storm water controls for all sites disturbing more than one acre. It is anticipated that this project will require a storm water permit which should prevent adverse impacts from storm water discharges associated with the proposed project.

The proposed improvements to the WTP would help the city provide a higher level of water treatment and have a positive effect on water quality. The proposed project would not increase water usage beyond the WTP's existing demand increases due to current population trends. It is anticipated that with a higher level of water treatment, the WTP will run more efficiently. In lieu of a request for federal or state grant funds, the city will be required to adopt both a Water Contingency and Drought Contingency Plan. These plans adopted by the city will provide guidance and regulations for long-term increases in residential and commercial water usage resulting from the proposed project.

3.2.2 Ground Water. The Gulf Coast Aquifer begins just north of the Rio Grande along the Texas Coastal Plain and extends from the Gulf Coast inland about 100 miles into the majority of Hidalgo County. The hydrogeologic unit underlying the project area is the combined Chicot and Evangeline aquifers. There are currently no underground water conservation districts with jurisdiction in the immediate or surrounding project area.

3.3 Climate and Ambient Air Quality. The climate of the area is modified Marine, classified as subtropical, sub-humid. Precipitation in the area averages about 23 inches annually, peaking during the periods of May-June and September-October. Wind velocity averages 11 miles per hour. Prevailing winds are generally from the south to southeast throughout the year, shifting north occasionally during the winter. Winters are mild and summers hot. Freezes are rare and frozen precipitation is extremely rare and of short duration.

3.3.1 Ambient Air Quality. Hidalgo County is an attainment area for the National Ambient Air Quality Standards (NAAQS). Air quality in the project area is generally good with particulates from unpaved roads, fugitive emissions from cotton gins, open burning of sugar cane fields and other agricultural-related activities occasionally exceeding NAAQS. However, resultant concentration levels are consistently below the NAAQS. A properly maintained and operated WTP and WWTP should have no odor problems and the effects of any odors should be directed to the northwest by the prevailing winds. The area will be buffered by distance allowing for reduction of odors to businesses and residences. As population increases within the project area, some degree of air quality degradation will occur. Increases in automobile traffic, commercial development, and construction would most likely result in higher levels of air pollutants. No significant adverse regional air quality impacts are foreseen as a result of the proposed project.

3.3.2 Noise. There will be some noise disturbance during construction and some disruption of traffic patterns may occur as well. These potential problems can be minimized by specifying routes for construction vehicles. The loudest noises generated by plant operation should be caused by normal repairs and maintenance, which will occur during daylight hours. However, the distances between the existing residences and the site should preclude any noise problems.

3.3.3 Hazardous Materials. The most serious potential effect on air quality would be a leak in the chloramine/disinfection system. The WTP is required to have an Emergency Release Plan and Risk Management Plan to minimize potential dangers to the public.

3.4 Biota.

3.4.1 Flora. The project area lies within the South Texas Plains Vegetational Area (Blair, 1950; Gould, 1975) of the south Texas natural region classified as being dominated by cultivated cover crops or row crops. In its native state, the vegetation in the areas away from streams and fossil channel depressions was probably grassland composed of tall bunch grasses. Areas near surface water bodies were more likely occupied by a woody brushland consisting of mesquite *(Prosopis glandulosa)*, granjeno (*Celtis llida*), whitebrush (*Aloysia gratissima)*, tasajillo (*Opuntia*

leptocaulis), retama (*Parkinsonia aculeate*), Texas ebony (*Pithecellobium ebano*), and prickly pear (*Opuntia* P. Mill.), which still exists along the Rio Grande. Little of the native vegetation survives in most of the planning area. Some vacant areas within the planning area contain a mixture of mesquite, acacia (*Acacia* P. Mill.), and prickly pear. These plants were present before development or they are re-growth that is occurring during the transition from agriculture to urban development.

The Lower Rio Grande Valley (LRGV) portion of the South Texas plains consisting of Cameron, Hidalgo, Willacy and Starr Counties has more lush vegetation due to the poor drainage of the area in the Rio Grande floodplain. Blair referred to the LRGV area as the Matamoran district and described it as poorly drained, luxuriant brushlands. (Blair, 1950) The Matamoran district, also known as the Tamaulipan brushland has been heavily influenced by human management, such as controlling the area hydrology and land clearing for agriculture, pasture land and urban uses. Most of the historically dominant dense riparian thickets are gone and have been replaced with agricultural or urban development. (USGS, 2001) The Matamoran vegetation that remains today can be divided into two categories; riparian/scrub forests and upland thornscrub/woodland. (Jahrsdoerfer & Leslie, 1988) Although many changes have occurred to the land in this region, the LRGV remains rich in wildlife and a haven and travel corridor for many rare species. Semi-tropical species also occurring in Mexico, grassland species which have a more northern range, and desert species that are more commonly found in the Trans-Pecos all occur in the LRGV. (Jahrsdoerfer and Leslie, 1988; TPWD, 2000)

3.4.2 Fauna. The Rio Grande Delta and nearby areas are unique in biota when compared to the rest of Texas and the U.S. (Blair, 1950) delineated biotic provinces of Texas based on topography, climate, vegetation types and terrestrial vertebrates other than birds. In this often-cited publication, Blair treats the LRGV as a biotic district (Matamoran) within the Tamaulipan biotic province. This subdivision may be attributed to the comparatively lush quality of the LRGV's brushland as well as its increased species diversity. This species diversity can be seen in the range of vertebrates from the subtropics, southwestern desert, prairie, coastal marshland, eastern forest and marine environment. (Jahrsdoerfer and Leslie, 1988) The description below of animal communities in Hidalgo County is specific to the Matamoran district, also known as the Tamaulipan brushland.

Over seven hundred (700) species can be found in the Matamoran district and several are found no where else in the United States. Many of the Matamoran specific species are also found in Mexico and the LRGV is the northern extent of the range. (Jahrsdoerfer and Leslie, 1988) Six of the sixty-one (61) mammalian species known from the Tamaulipan Province of Texas occur only in the Matamoran District. They are the jaguarundi (*Felis yagouaroundi*), Coue's rice rat (*Oryzomys couesi*), the Mexican spiny pocket mouse (*Liomys irroratus*), the Gulf Coast hog-nosed skunk (*Conepatus leuconotus*), ghost-faced bat (*Mormoops megalophlla*), northern yellow bat (*Lasiuras intermedius*). (Blair, 1950; nomenclature from Davis and Schmidly, 1994)

One lizard species occurs only in the Matamoran biotic district, mesquite lizard (*Sceloporu grammicus*). (Blair, 1950) Four snakes are only found in the Matamoran district, speckled racer (*Drymobius margaritiferus*), Mexican hooknose snake (*Ficimia streckeri*), northern cat-eyed snake (*Leptodeira septentrionalis*), and black-striped snake (*Coniophanes imperialis*). (Blair, 1950; nomenclature from Werler and Dixon, 2000) The speckled racer, northern cat-eyed snake and the black-striped snake are all state-listed as threatened species. The three anurans specific to the Matamoran district are *Hyla bandinii* (treefrog, common name unknown), Rio Grande chirping frog (*Syrrhophus cystignathoides campi*), white-lipped frog (*Leptodactylus labialis*). (Blair, 1950; nomenclature from Conant and Collins, 1998)

Bird life is diverse as well, due in large part to the geographical diversity and abundance of habitats. At least 350 species of birds have been identified in the region according to the Lower Rio Grande Valley source lists. Birds that range no further north than the LRGV include the least grebe (*Podiceps dominicus*), olivaceous cormorant (*Phalacrocorax olivaceus*), red-billed pigeon (*Columba flavirostris*) and brown jay (*Psilorhinus morio*). (Jahrsdoerfer and Leslie, 1988) Other rare birds that occur in the LRGV and near the project area are the green jay (*Cyanocorax yncas*), chachalaca (*Ortalis vetula*) and orioles (*Icterus spp.*). (Jahrsdoerfer and Leslie, 1988)

3.4.3 Threatened or Endangered Species. Several threatened or endangered species designated by the TPWD and the U.S. Fish and Wildlife Service (FWS) are known to occur in Hidalgo County. A review and field surveys of the threatened and endangered species list for Hidalgo County maintained by the FWS as well as the TPWD Biological Conservation Data (BCD) System list of threatened and endangered species for Hidalgo County were conducted on July 24 and 25, 2003. The surveys were conducted primarily on foot to study plant community and habitat characteristics, which were previously identified from aerial photography as possible habitat for federal or state-protected species. Eight federally listed threatened or endangered species occur or potentially occur within Hidalgo County. No designated critical habitat for any federally listed species is known to occur within the proposed project area and no listed species were observed during the field surveys. Potential suitable habitat in the proposed project area does not exist for the listed species.

Under the Endangered Species Act (ESA) of 1973, both animal and plant species are listed for conservation and recovery and may be listed as either endangered or threatened. A species may be classified as "endangered" when it is in danger of extinction within the foreseeable future throughout a significant portion of its range. A "threatened" classification is provided to those animals and plants likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges. The FWS and the National Marine Fisheries Service (NMFS) share responsibility for administering the ESA.

Fauna. In 1973, the Texas legislature authorized the TPWD to establish a list of endangered animals in the state of Texas. Thirty State-listed threatened or endangered species occur or potentially occur within Hidalgo County, Texas. The TPWD has noted the potential presence of several state-listed species, including black-spotted newt (*Notophthalmus meridionalis*), which could occur in resacas and drainage ditches; the black-striped snake (*Coniophanes imperialis*); and the Runyon's water-willow (*Justicia runyonii*), which is found along a drainage ditch outside the project area. Although potential habitat exists for the listed species, no individuals of these species were observed during field survey of the proposed project area.

Amphibians. There are no federally or state listed endangered amphibian species identified as occurring within Hidalgo County. However, there are five state threatened species: the black-spotted newt (*Notophathalmus meridionalis*); the South Texas siren (*Siren sp.1*); the Mexican treefrog (*Smilisca baudinii*); the Sheep frog (*Hypopachus variolosus*); and the white-lipped frog (*Leptodactylus fragilii*). The proposed project will not involve disturbance of natural waterways or other wetlands on a large scale, so it is unlikely that this project will impact these species.

Birds. There are ten bird species that are state listed as threatened in Hidalgo County: the Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*); the Common black hawk (*Buteogallus anthracinus*); the Northern Gray Hawk (*Buteo nitidus*); the Northern beardless-tyrannulet (*Camptostoma imberbe*); the Reddish egret (*Egretta rufescens*); the Rose-throated becard (*Pachyramphus aglaiae*); the Tropical parula (*Parula pitiayuma*); the White-faced Ibis (*Plegadis chihi*); the White-tailed hawk (*Buteo albicaudatus*); and the Zone-tailed Hawk (*Buteo albonotatus*). The northern aplomado falcon (*Falco femoralis septentrionalis*) and the interior

least tern (*Sterna antillarum athalassos*) may also exist in Hidalgo County. The northern aplomado falcon has historically ranged through the grassland, savannah and desert scrub areas of south Texas and into New Mexico, Arizona, Mexico and Guatemala. Habitat loss caused by uncontrolled livestock grazing and fire suppression combined with pesticide contamination are the main reasons for the decline of the aplomado falcon. The interior least tern use barren to sparsely vegetated sandbars along rivers, sand and gravel pits or like and reservoir shorelines for habitat. Terns nest in small colonies found in shallow holes in open sandy areas, gravelly patches or exposed flatlands. Recreational activities on river and sandbars have disturbed tern nestings.

It is not anticipated that any endangered bird species habitat would be impacted by the proposed project. Only a small area south of the existing WTP would be converted from its current open space land use. This area is adjacent to the existing WTP and FM 88 and is an unlikely area for endangered species habitat since it has been previously disturbed and periodically maintained through mowing since construction. All other project areas lack any potential bird habitat.

Fish and Reptiles. There are no federally or state listed endangered fish or reptiles species identified as occurring within Hidalgo County. There are seven state listed threatened reptile species: the reticulate collared lizard (*Crotphytus reticulates*); the black striped snake (*Coniophanes imperialis*); the indigo snake (*Drymarchon corais*); the northern cat-eyed snake (*Leptodeira septentrionalis*); the speckled racer (*Drymobius margaritiferus*); the Texas horned lizard (*Phrynosoma cornutum*); and the Texas tortoise (*Gopherus berlandieri*). Considering the degree of urban development in and around the project areas, it is not anticipated that any of these species will be encountered. Only a small open space area adjacent and south of the existing WTP will be cleared for construction. This area is adjacent to the existing WTP and FM 88; an unlikely area for endangered species habitat.

Mammals. There are two endangered mammalian species that might exist within the project area: The ocelot (*Felis pardalis*) and jaguarundi (*Felis yagouaroundi*). The ocelot is a medium sized, spotted cat with a long tail and rounded ears. Habitat consists of mixed brush species, such as spiny hackberry, brasil, desert yaupon, wolfberry, lotebush, amargosa, whitebrush, catclaw, blackbrush, lantana, guayacan, cenizo, elbowbush and Texas persimmon and some trees, such as mesquite, live oak, ebony and hackberry. Canopy cover and shrub density must be near 95 percent to create optimal habitat for the ocelot. Historically, the ocelot ranged from the southern Edwards Plateau to the Coastal Plain and south to the border. Today ocelot habitat can be found in a handful of counties in south Texas.

The jaguarundi is a small brown or gray cat similar in appearance to a domestic cat. Habitat for this species is thorny shrublands consisting of spiny hackberry, brasil, desert yaupon, wolfberry, lotebush, amargosa, whitebrush, catclaw, blackbrush, lantan, guayacan, cenizo, elbowbush and Texas persimmon in the Rio Grande Valley and Plains. Riparian habitat and open spaces are occasionally used, but overall jaguarundi have similar requirements to the ocelot, which are dense brush and canopy cover. Since both WTP and NWWTP construction will take place at the existing plant sites, these mammals should not be significantly affected. Neither site contains the habitat necessary for each species.

Flora. In 1988 the Texas legislature authorized the TPWD to establish a list of threatened and endangered plant species for the state. The TPWD reviewed the project amendments and recommended that (1) construction in stream crossings be limited to periods of minimal flow, (2) removal of fencerow vegetation be avoided and allowed to remain within the buffer area, (3) construction activities that would result in the removal of nests and nest structures, or clearing and/or trampling vegetation be scheduled to avoid the general bird nesting season of March through August, (4) vegetation clearing be limited to minimize destruction of stream bank stabilizing vegetation, (5) Best Management Practices be used at stream crossings to limit

erosion, and siltation or sedimentation, and (6) native plants be used in revegetation, with a two year post-construction monitoring period. According to the TPWD and the FWS list of threatened and endangered species of South Texas, the following three endangered species of flora have been identified as possibly being encountered in the proposed project area:

Star Cactus (*Astrophytum asterias*). Native habitat of the star cactus is sparsely vegetated areas in gravelly, saline clays or loams and low elevations in the Rio Grande Plains. Star cactus

historically occurred in Cameron, Starr, and Hidalgo Counties in Texas and in Nuevo Leon and Tamaulipas states in Mexico. In Texas, it is now limited to one site along a creek drainage in Starr County. Loss of habitat threatens this species. Root-plowing and other mechanical and chemical brush control practices as well as conversion of habitat to agricultural fields and urbanization have played roles in the decline of this species. This species was both federally and state listed as endangered in 1993. Currently, no populations of the species are known of in Hidalgo County. It is not anticipated that this species will be impacted by the proposed project due to its scarcity in the area and the previously distributed WTP and NWWTP project sites.

Walker's Manioc (*Manihut walkercre*). Native habitat of the Walker's Manioc is found in areas of sandy loam with underlying caliche layer in open area within native brush. The species is found in Starr and Hidalgo counties in the south Texas plains, and in the state of Tamaulipas, Mexico. Recently, several populations have been discovered from far South Texas and adjacent Mexico. Historical localities where the species was found during the 1940's no longer support Walker's Manioc. Much of the native brush habitat in the historical range of Walker's Manioc has been cleared for agriculture, urbanization, or improved pasture. This species was both federally and state listed as endangered in 1991. It is not anticipated that Walker's Manioc will be impacted since the WTP and NWWTP sites have been previously disturbed and cleared of vegetation.

Texas Ayenia (*Ayenia limitaris*). Texas ayenia grows in dense, relatively moist, subtropical riparian woodlands with an overall canopy cover of about 95 percent. The Texas ayenia exists in the United States in one small population of about 20 individuals in Hidalgo County on nearly level sandy clay loam soils of the Hidalgo series. This species was both federally and state listed as endangered in 1994. It is not anticipated that any of these species will be impacted by the proposed project since there is lack of proper habitat at the existing WTP and NWWTP sites with all areas having been previously disturbed and periodically maintained through mowing since construction.

Direct long-term effect on threatened and endangered species in the area should be negligible, since project sites will be located in urban areas. If any threatened and endangered species, special features or natural communities are encountered during construction precautions will be taken to lessen impacts. Appropriate federal or state representatives will be notified. Mitigative actions as typically required by appropriate agencies will be taken. The FWS and TPWD have been contacted for comments on the proposed project for federally listed threatened and endangered species.

3.5 Floodplains and Wetlands. According to the floodplain maps for Weslaco prepared by the Federal Emergency Management Agency (FEMA), all of the NWWTP and the WTP sites are outside of the 100-year floodplain. All sections of the city lie beyond the Rio Grande floodplain and the Main Floodway. No natural channels or waterways (resacas, oxbows, creeks, etc.) are located in the vicinity of the project area or the city.

3.6 Cultural Resources. From records with the Texas Archeological Research Laboratory (TARL), it was determined that no prehistoric archeological sites are recorded within one-half mile of the proposed project area. No sites listed in the National Register of Historic Places (NRHP) or registered as State Archeological Landmarks were found within the project area. Correspondence with the Texas Historical Commission (THC) indicates that no historic properties will be affected by the project, and have given authorization for the project to proceed.

3.7 Socio-economics and Environmental Justice. The economy of the Lower Rio Grande Valley is based on irrigated farming and ranching. The area is a leader in the state in the production of citrus fruit, vegetables and cotton. Oil and gas production is a secondary, but

locally important industry in Hidalgo, Starr, and Willacy counties. Tourism is also an important minor industry for these counties with a large seasonal influx of winter residents entering every year. Despite the healthy economic activities, most of the region remains poor and has among the highest birth rate, lowest per capita income, and some of the highest unemployment rates in the nation.

Census 2000 data indicated that the average annual median household income for the area of Weslaco was $25,026, and average annual per capita income was $10,057. The state annual median household income was $39,927 and average annual per capita income was $19,617.[1] Annual median household income for the city is 33.4 percent below the state average. Bureau of Labor data for September 2003 indicated an Hidalgo County unemployment rate of 13.1 percent. Texas Workforce Commission (TWC) data for 2002 estimated an annual 15.6 percent unemployment rate for the City of Weslaco and a 6.6 percent statewide unemployment rate for September 2003.

Under Section 601 of Title VI of the 1964 Civil Rights Act (42 USC 200), and Executive Order 12898 (February 1994), federal agencies must identify and address, as appropriate, disproportionately high and adverse effects on human health and environment of their programs, policies, and activities on minority and low-income populations. A basic Environmental Justice[2] (EJ) analysis was performed utilizing the EJ Index[3] to assess potential disproportionately high and adverse effects of the proposed project on minority and low income communities. The EJ study was based on three criteria: (1) whether the community currently suffers, or has historically suffered, from environmental and health risks or hazards, (2) whether a potential for disproportionate risk exists, and (3) whether the community has been sufficiently involved in the decision-making process.

EPA Region 6 Environmental Justice Index methodology considers the percentage of minority persons and of economically distressed households earning less than $20,000 per year of the population within a one-half and four mile radius of the site in comparison with state-wide percentages. According to Census 2000 data approximately 30.3 percent of Weslaco's households earn less than $15,000 per year; approximately 83.8 percent of Weslaco's residents are Hispanic or Latino. These percentages are significantly higher than state-wide totals of 17 percent and 32 percent, respectively. The index for the one square mile area around the proposed project and for the 50 square mile area around the facility indicate a disproportionately high percentage of minority and low income populations, which is a good indicator for high project priority for financial assistance. The majority of residents benefitted by the project will be low income and minorities.

Economic Impacts of Proposed Project. Currently, the city of Weslaco owns 7,150 acre-feet per year of water rights, or approximately 6.4 MGD. Based on the recommended projections, the

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[1] Compiled from Census 2000 Census Tracts 223, 224, 225.02, 226, 227.01 and 227.02.

[2] The EPA defines environmental justice as conveyed by the Executive Order, as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The goal of fair treatment is not to shift risks among populations, but to identify potential disproportionately high and adverse human health and environmental effects on minority populations and low income populations and identify alternatives to mitigate those impacts.

[3] The EPA Region 6 EJ Index Methodology defines demographic criteria and applies basic principles of science to evaluate the potential impacts on minority and low-income communities. The methodology uses Geographical Information System maps, U.S. Census demographic data, and a mathematical formula to analyze one square mile and 50 square mile geographic areas around a project site. The index indicators range from 0, where the factors affecting minorities are considered to be in proportion when compared to the state average, to 100, where the factors are considered to be greatly disproportionate when compared to the state average.

city would need to increase the water rights owned to 9,185 acre-feet per year (8.2 MGD) to meet future water needs. Also, without the grant funding from the BECC/NADBank, the city would have to borrow loan funds and increase its utility service rate structure to accommodate repayment of bonds.

3.7 Prime and Unique Agricultural Land. The Natural Resource Conservation Service (NRCS) defines "prime farmland" as the land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Prime farmland has an adequate and dependable water supply, a favorable water temperature and growing season, acceptable acidity and alkalinity, acceptable salt and sodium content and few or no roads. Air and water flow readily through the soil and the soil is not subject to excessive soil erosion. It is protected from flooding and is not saturated with water for long periods of time.

Four soils within the proposed project area are classified prime farmland. These include Arents, loamy (irrigated), Hidalgo sandy clay loam, 0 to 1 percent slopes, Hidalgo sandy clay loam, 1 to 3 percent slopes, Runn silty clay. These soils are potentially or currently in agricultural use and are located within the project area. All of the land area affected by proposed project has been previously disturbed and periodically maintained through mowing since construction, is not currently in agricultural use, and would not meet the definition of prime farmland.

4.0 OTHER ENVIRONMENTAL CONSIDERATIONS

4.1 Cumulative Impacts. The city's consulting engineer, Sigler, Winston, and Greenwood and Associates (SWG), is in the process of completing the design for the new headworks at the NWWTP. The project is approximately 50 percent completed. Work on the design was suspended pending receipt of additional funding. No cumulative significant adverse environmental impacts have been identified as resulting from the proposed project in association with other ongoing or completed actions in the area. However, failure to implement the proposed improvements could result in increased wastewater flows without the treatment capacity, exacerbating the existing raw sewage discharge problems.

4.2 Cross-Border Impacts. The city is approximately seven miles north from the Mexican border city of Nuevo Progreso. Due to the project area's proximity to the U.S.-Mexico border, the proposed improvements would benefit communities in the two nations. There is the potential for odors emanating from the WWTP to affect these areas. However, implementation of the proposed project and the reduction in the use of on-site wastewater treatment systems will improve the ambient air quality, and the quality of surface and ground water in the region. The predominant wind direction is from southeast to northwest, into primarily undeveloped agricultural areas.

4.3 Unavoidable Adverse Effects. Short-term primary impacts from the project will involve potential disruption of traffic patterns, dust and noise generated from construction activities, and runoff from trenches and cleared areas. By designating construction routes to the site, the traffic disturbances can be minimized, and dust control measures, such as irrigating the access roads will be part of the specifications for the project. If construction activities disturb more than one acre of land, a storm water discharge permit from the TCEQ will be required.

4.4 Relationship Between Local, Short Term Use of the Environment and the Maintenance/enhancement of Long Term Beneficial Uses. The development of this project will have a beneficial impact on the city of Weslaco residents which outweigh any negative impacts associated with the upgrade of the WTP. The treatment capacity to meet both current and future demands will minimize the costs involved with construction and operations and

properly decommissioned NWWTP. The city has attempted to meet the needs of its residents by developing long term planning that address both current and future needs of the community, including the city's current process of working with the BECC to develop a facility plan, environmental information document and BECC project certification document. These efforts have provided a vision for the future that would minimize adverse environmental impacts, while offering tangible environmental and economic benefits for the City. The proposed project would not increase existing development growth patterns and would not specifically encourage future population growth.

4.5 Irreversible and Irretrievable Commitment of Resources. The primary irreversible and irretrievable commitment of resources associated with this project are the land, labor, materials, machinery wear, monies spent, and energy used for construction and operation of the facilities. The financial resources committed for this project include the grant and loan funds used to construct the WTP and complete decommissioning of the NWWTP. The natural resources committed include land, the adjacent open space south of the WTP which will have to be cleared and used for construction of the new sedimentation and filtration basins. This space is currently not being utilized for any specific land use.

5.0 PUBLIC HEARINGS & COORDINATION WITH REVIEW AGENCIES

As a condition for any project funding by the BECC/NADB, a minimum of three public hearings with residents will be held. The first two hearings will discuss the technical aspects and environmental impacts of the proposed project. The final hearing will discuss the financial impacts to residents of the proposed project. These hearings must be complete before BECC/NADB certification will be considered. The following agencies were sent copies of this document and asked for their comments:

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
Natural Resources Conservation Service
Federal Emergency Management Agency
Texas Commission on Environmental Quality
Texas Water Development Board
Texas Parks and Wildlife Department
Texas Historical Commission
State Historic Preservation Officer
Texas Archeological Research Laboratory
International Boundary and Water Commission
Border Environment Cooperation Commission
North American Development Bank
Rural Development Administration
South Texas Development Council
Hidalgo County
City of Weslaco

6.0 MAPS AND CORRESPONDENCE LETTERS

7.0 REFERENCES

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